

Response to July 3, 2006 Office Action  
U.S. Patent Application 10/612,298  
Response date: January 3, 2007

### **REMARKS**

With entry of the amendments, claims 1-45 are pending. Claims 5-9 and 43-45 are under consideration, and claims 1-4 and 10-42 have been withdrawn from consideration. Claims 44 and 45 have been amended to depend from claim 43 instead of claim 31, support for which can be found on at least page 4, paragraph 19, of the specification. Claim 44 has been further amended to clarify that “the solid support is a bead,” rather than “attached to” a bead, support for which can be found on at least page 4, paragraph 18, of the specification.

Claims 5-9 and 43-45 are variously rejected as follows. In view of the arguments set forth below, Applicant respectfully requests reconsideration on the merits of the application and allowance of the claims.

#### **Election/Restrictions**

Applicant acknowledges the Examiner’s indication that the restriction requirement has been made final and that claims 1-4 and 10-42 are withdrawn from further consideration as being drawn to a nonelected invention. Applicant reserves the right to prosecute the non-elected claims in one or more divisional patent applications.

#### **Claim Objections**

The Examiner has objected to claims 44 and 45 under 37 C.F.R. 1.75(c) as being in improper dependent form for failing to further limit the subject matter of a previous pending claim. As indicated above, Applicant has amended claims 44 and 45 to depend from claim 43. In light of the above, Applicant respectfully requests that this objection be withdrawn.

#### **Indefiniteness Rejections**

Claims 5-9 and 43-45 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner alleges that the term “D-peptide(s)” in claims 5-9 and 43 is used to refer to a “peptide containing all D amino acids,” while the accepted

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meaning of “D” concerns the stereochemistry of one residue, not the entire sequence. Applicant submits that the rejected claims are clear as currently written, particularly in view of the specification which defines “D-peptides” on page 3, paragraph 13, as “a peptide comprising amino acids of D-configuration.”

The Examiner also alleges that there is insufficient antecedent basis for the term “the library” in claims 44 and 45 and that the scope of the phrase “the solid support is attached to a bead” of claim 44 is ambiguous. As provided above, claims 44 and 45 have been amended to depend from claim 43 instead of claim 31, and claim 44 has been amended to clarify that “the solid support is a bead,” rather than attached to a bead.

In light of the above, Applicant respectfully requests that the rejection of claims 5-9 and 43-45 under 35 U.S.C. § 112, second paragraph, be withdrawn.

#### Anticipation Rejections

Claims 5-9 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Dooley et al. (Science 266:2019-2022 (1994)). The Examiner alleges Dooley et al. teach the preparation of libraries with D-amino acid containing heptapeptides. More particularly, the Examiner asserts that Dooley et al. teach an Ac-rtfwyxx-NH<sub>2</sub> library, which contains fixed residues including D-tryptophan (r), D-tyrosine (t) and D-phenylalanine (f) in 100% of the species in the library, thereby anticipating claims 5 and 6, and further teach that the two random residues provide 400 peptide species (20 x 20), anticipating claims 7, 8 and 9.

Claims 5-8 are also rejected under 35 U.S.C. § 102(b) as being anticipated by Pinilla et al. (J. Mol. Biol. 293:1013-1025 (1998)). The Examiner alleges Pinilla et al. anticipate claims 5 and 6 because they purportedly teach an all-D amino acid containing hexapeptide library. The Examiner further asserts that Pinilla et al. anticipate claims 7 and 8 because the library of Pinilla et al. allegedly consists of 27 total peptide species.

Enclosed herein is the executed declaration of Dr. Byron E. Anderson, the inventor of the above-identified application. Also enclosed are a copy of Dr. Anderson’s Curriculum Vitae and a copy of references discussed by Dr. Anderson in the declaration that have not been previously

cited by the Examiner, including Houghten, R.A., et al., Nature 354:84-86 (1991); Pinilla et al., Gene 128:71-76 (1993); and Dooley et al., Proc. Nat. Acad. Sci. 90:10,811-10,815 (1993).

In his declaration, Dr. Anderson discusses various reasons why Dooley et al. and Pinilla et al. fail to disclose all of the limitations of claim 5, and thus, do not anticipate claim 5 of the present application. Dr. Anderson states that his assertion “is based on (a) the interpretations of what constitutes a library by the Dooley et al. and Pinilla et al. authors, and (b) the differences between the aromatic residue contents of the Dooley and Pinilla et al. libraries as compared to the libraries of the present patent application.” (Declaration, p. 4.) More specifically, Dr. Anderson clarifies that “the description of Table 1 on page 2020 provides that Dooley et al. . . . discloses peptide mixtures, not peptide libraries as asserted by the Examiner.” (*Id.* at pp. 3-4.) With respect to Pinilla et al., Dr. Anderson states that “Table 1 does not disclose a peptide library. Pinilla et al. have identified 27 peptide sequences individually. . . . These are individual peptides that are grouped into this one table and they clearly do not constitute a library.” (*Id.* at pp. 6-7.)

In conclusion, Dr. Anderson asserts that “because Dooley et al. and Pinilla et al. do not disclose a library comprising” all of the limitations of claim 5, “Dooley et al. and Pinilla et al. do not anticipate claim 5.” (*Id.* at p. 7.) Further, because Dooley et al. and Pinilla et al. do not anticipate claim 5 of the present application, they do not anticipate claims 6-9, which depend from claim 5. In light of the arguments set forth in the declaration submitted herein, Applicant respectfully requests that the rejection of claims 5-9 under 35 U.S.C. § 102(b) be withdrawn.

#### Obviousness Rejections

Claims 5-9 and 43-44 are rejected under 35 U.S.C. § 103(a) as being obvious over either Dooley et al. or Pinilla et al., in view of Lam et al. (Nature 354:82-84 (1991)) or Lebl et al. (Biopolymers 37:177-198 (1995)). The Examiner alleges Dooley et al. and Pinilla et al. teach or suggest all of the limitations of claims 5-9, and claims 5-8, respectively. The Examiner further alleges that each of these references teach or suggest all of the limitations of claims 43-45, except for “D-Peptide(s) on solid support beads.” The Examiner alleges, however, that Lam et al. and Lebl et al. teach the preparation of peptide libraries on solid support beads and that it

would have been obvious to one having ordinary skill in the art to combine the teachings of Dooley et al. and/or Pinilla et al. with the teachings of Lam et al. or Lebl et al. to result in the subject matter of claims 43-45.

Claims 5-9 and 45 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dooley et al., in view of Satoh et al. (Analytical Biochemistry 260:96-102 (1998)). The Examiner alleges that Dooley et al. teach all of the elements of the claims except for peptides attached to a microtiter plate. The Examiner further alleges, however, that Satoh et al. teach the immobilization of peptides on 96-well microtiter plates coated with methyl vinyl ether-maleic anhydride and that it would have been obvious to combine the teachings of Dooley et al. with those of Satoh et al. to result in the subject matter of the rejected claims.

As discussed above with respect to the rejection of claims 5-9 under 35 U.S.C. § 102(b), and in light of the arguments set forth in the declaration of Dr. Anderson, Applicant submits that Dooley et al. and Pinilla et al. fail to teach or suggest all of the limitations of claims 5-9. Further, the Examiner has conceded that Dooley et al. and Pinilla et al. fail to teach or suggest all of the limitations of claims 43-45. Thus, Applicant submits that Dooley et al. and Pinilla et al. fail to teach or suggest all of the limitations of claims 5-9 and 43-45.

Applicant further submits that Lam et al., Lebl et al. and Satoh et al. fail to cure the deficiencies of Dooley et al. and Pinilla et al. in teaching or suggesting all of the limitations of claim 5. Nowhere do Lam et al., Lebl et al. or Satoh et al. teach or suggest a "library comprising a plurality of D-peptides, wherein each D-peptide comprises from three to seven D-amino acid residues, wherein at least 25% of the D-peptides comprise at least three amino acid residues independently selected from the group consisting of D-tryptophan, D-tyrosine, and D-phenylalanine," as is required by claim 5. Thus, because Dooley et al., Pinilla et al., Lam et al., Lebl et al. and Satoh et al. fail to combine to teach or suggest all of the limitations of claim 5, these references fail to combine to teach or suggest all of the limitations of claims 6-9 and 43-45, which depend from claim 5.

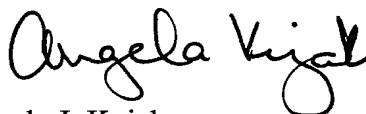
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In light of the arguments set forth both above and in Dr. Anderson's declaration, Applicant respectfully requests that the rejection of claims 5-9 and 43-45 under 35 U.S.C. § 103(a) be withdrawn.

As the application is now in condition for allowance, Applicant respectfully requests withdrawal of the rejections and allowance of the claims. Applicant invites the Examiner to contact the undersigned should further clarification concerning this response be required.

The fee for the three-month extension of time should be charged to deposit account 50-0842. No other fee is believed due in connection with this submission. Please charge any additional fee due to Deposit Account No. 50-0842.

Respectfully submitted,

A handwritten signature in black ink that reads "Angela Kujak". The signature is written in a cursive, flowing style.

Angela J. Kujak  
Reg. No. 58,252

File No. 093073-9001 US01  
Michael Best & Friedrich LLP  
One South Pinckney Street  
P. O. Box 1806  
Madison, WI 53701-1806  
608.257.3501